

CLAIMS

What is claimed is:

- 5 1. A method for a wireless communication device to enable a wireless system infrastructure to provide voice recognition service to the wireless communication device, the method comprising the steps of:
- storing voice recognition information specific to a user of the wireless communication device in a memory of the wireless communication device, the
- 10 voice recognition information being usable by a voice recognition processor of the wireless system infrastructure to provide voice recognition service to the wireless communication device; and
- transmitting the voice recognition information to the wireless system infrastructure for use by the voice recognition processor during operation of the
- 15 wireless communication device.
2. The method of claim 1, wherein the step of transmitting the voice recognition information is performed responsive to a request for the voice recognition information received from the wireless system infrastructure.
- 20 3. The method of claim 1, wherein the voice recognition information comprises a context model.
4. The method of claim 3, wherein the context model includes instructions
- 25 that allow the user of the wireless communication device to perform at least one of the following functions:
- a) control operation of the wireless communication device;
- b) control operation of a remotely located electronic device;
- c) retrieve information stored in the wireless communication device;
- 30 and
- d) establish a communication in a wireless communication system.

7. A method for a wireless communication device to enable a wireless system infrastructure to provide voice recognition service to the wireless communication device, the wireless system infrastructure forming part of a wireless communication system, the method comprising the steps of:

- 5 storing voice recognition information specific to a user of the wireless communication device in a memory of the wireless communication device, the voice recognition information being usable by a voice recognition processor of the wireless system infrastructure to provide voice recognition service to the wireless communication device;
- 10 transmitting a request to operate in the wireless communication system to the wireless system infrastructure, the request to operate including a first identifier associated with the wireless communication device and a second identifier associated with the voice recognition information;
- receiving a request for voice recognition information from the wireless
- 15 system infrastructure responsive to the request to operate; and
- transmitting the voice recognition information to the wireless system infrastructure responsive to the request for voice recognition information to facilitate use of the voice recognition information by the voice recognition processor during operation of the wireless communication device.

20

8. The method of claim 7, wherein the request for voice recognition information is received in the event that the second identifier indicates that the voice recognition information has been changed relative to voice recognition information previously received with respect to the wireless communication

25 device.

9. The method of claim 7, wherein the request for voice recognition information is received in the event that the first identifier indicates that no voice recognition information has been previously received with respect to the wireless

30 communication device.

10. A method for providing voice recognition functionality to a wireless communication device, the method comprising the steps of:

storing a first portion of a voice recognition processing engine in the wireless communication device;

5 implementing a second portion of the voice recognition processing engine in a wireless system infrastructure accessible by the wireless communication device, wherein the first portion is substantially smaller than the second portion; and

10 using both the first portion and the second portion of the voice recognition processing engine to provide voice recognition functionality to the wireless communication device.

11. The method of claim 10, wherein the first portion of the voice recognition processing engine comprises a context model and voice training parameters.

15

12. The method of claim 11, wherein the second portion of the voice recognition processing engine comprises a voice recognition processor and programming instructions for operating the voice recognition processor to enable the voice recognition processor to provide voice recognition functionality upon receipt of the first portion of the voice recognition processing engine from the wireless communication device.

20

13. A method for a wireless system infrastructure to provide voice recognition service to a wireless communication device, the wireless system infrastructure forming part of a wireless communication system, the method comprising the steps of:

5 receiving a request to operate in the wireless communication system from the wireless communication device, the request to operate including a first identifier associated with the wireless communication device and a second identifier associated with voice recognition information stored in a memory of the wireless communication device;

10 determining whether voice recognition information associated with the wireless communication device is presently stored in the wireless system infrastructure based on the first identifier; and

in the event that voice recognition information associated with the wireless communication device is not presently stored in the wireless system infrastructure, requesting transmission of the voice recognition information stored in the memory of the wireless communication device.

14. The method of claim 13, further comprising the steps of:

in the event that voice recognition information associated with the wireless communication device is presently stored in the wireless system infrastructure,

comparing the second identifier to a third identifier associated with the voice recognition information presently stored in the wireless system infrastructure; and

25 requesting transmission of the voice recognition information stored in the memory of the wireless communication device in the event that the third identifier differs from the second identifier.

30

15. The method of claim 13, further comprising the steps of:

receiving the voice recognition information stored in the memory of the wireless communication device to produce received voice recognition information; and

5 storing the received voice recognition information in a memory of the wireless system infrastructure.

16. The method of claim 15, wherein the received voice recognition information comprises a context model.

10

17. The method of claim 16, wherein the context model includes at least one instruction that allows a user of the wireless communication device to perform at least one of the following functions:

- 15
- a) control operation of the wireless communication device;
 - b) control operation of a remotely located electronic device;
 - c) retrieve information stored in the wireless communication device;
 - d) establish a communication in a wireless communication system;
- and
- e) control operation of a voice recognition processor forming part of
- 20 the wireless system infrastructure.

18. The method of claim 17, further comprising the steps of:

receiving a first data message from the wireless communication device, wherein the first data message includes an instruction of the at least one

25 instruction;

determining the instruction contained in the first data message based on the received voice recognition information to produce a determined instruction; and

30 generating a second data message representative of the determined instruction to facilitate execution of the instruction.

19. A wireless communication device comprising:

a memory device that stores voice recognition information specific to a user of the wireless communication device, the voice recognition information being usable by a voice recognition processor of a wireless system infrastructure to provide voice recognition service to the wireless communication device; and

a transmitter, operably coupled to the memory device, that transmits the voice recognition information to the wireless system infrastructure for use by the voice recognition processor during operation of the wireless communication device.

20. The wireless communication device of claim 19, wherein the memory device comprises a memory device inserted into the wireless communication device by the user.

21. The wireless communication device of claim 19, further comprising:

a receiver that receives a request for the voice recognition information from the wireless system infrastructure; and

a processor, operably coupled to the receiver, the transmitter, and the memory device, that retrieves the voice recognition information from the memory device responsive to the request, prepares a data message containing the voice recognition information, and instructs the transmitter to transmit the data message to the wireless system infrastructure.

22. A wireless system infrastructure that provides voice recognition service, the wireless system infrastructure comprising:

a base transceiver site that receives, during a first time period, voice recognition information from a wireless communication device to produce

5 received voice recognition information, wherein the received voice recognition information includes a context model, and that receives, during a second, later time period, a first data message from the wireless communication device containing an instruction forming part of the context model;

a memory device, operably coupled to the base transceiver site, that stores
10 the received voice recognition information to produce stored voice recognition information; and

a voice recognition processor, operably coupled to the memory device and the base transceiver site, that generates a second data message representative of the instruction contained in the first data message based on the stored voice
15 recognition information, the second data message being used to execute the instruction.

Patented Dec 22, 2010

23. A memory device for use with a wireless communication device, the memory device comprising at least one memory location that stores voice recognition information associated with the wireless communication device, the voice recognition information including a context model and being used to
- 5 provide voice recognition functionality to the wireless communication device.
24. The memory device of claim 23, wherein the memory device is insertable into the wireless communication device.
- 10 25. The memory device of claim 23, wherein the at least one memory location further stores an identifier associated with the voice recognition information.